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10/092,372	03/05/2002	Graham Andrew Cairns	YAMAP0805US	8248

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 02/01/2005

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/092,372

Applicant(s)

CAIRNS ET AL.

Examiner

Kimnhung Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4-15-05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 20, 24 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 16-19, 21-23 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>Z</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Application has been examined. The claims 1-29 are pending. The examination results are as following.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-23 recites the limitation "A controller" in line 1. There is insufficient antecedent basis for this limitation in the claim.

3. Claims 24-25 and 27-29 recites the limitation " A display" in line 1. There is insufficient antecedent basis for this limitation in the claim.

4. Claims 10-11, line 3, "synchronisation" should change to-- synchronization--.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1-3, 13-15, 20, 24 and 26-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Eglit (US 6,054,980 cited by Applicant).

Regarding claims 1, 28, Eglit discloses in figures 3-4, a controller for controlling the frame refresh rate of an active matrix display, characterized by comprising a first circuit (390) responsive to display signals from a display controller for supplying an enable signal (479) for each Nth frame (N, see fig. 4), wherein N is an integer greater than zero and N is selectable from a plurality of values (see fig. 4, col. 8, lines 53-61); and a second circuit (see frame buffer 320, and display interface 330) for enabling refreshing of the display by each Nth frame supplied to the display controller in response to the enable signal (see fig. 4, col. 8, lines 53-61) and therefore preventing refreshing of the display by each other frame supplied to the display controller in the absence of the enable signal.

Regarding claim 2, Eglit discloses the display signals include frame synchronization signals (401, fig. 4) and the first circuit (390) is responsive to each Nth frame synchronization signal (401).

Regarding claim 3, Eglit discloses that the first circuit is arranged to supply the enable signal for the duration of each frame (see col. 9, lines 16-23).

Regarding claims 13-14, Eglit discloses that the first circuit includes means for fixing N (see fig. 4) at a value greater than one, and the N is selectable from a plurality of predetermined values.

Regarding claim 15, Eglit discloses the first circuit has an input (FC (1:N)) for selecting the value of N (see N on 460, fig. 4).

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Regarding claims 20, 24, Eglit discloses in fig. 4 that a frame rate reduction enable input (FRC), and including a frame refresh rate controller (see abstract).

Regarding claim 27, Eglit discloses in figure 4 that the second circuit of the controller is disposed adjacent an input of the display for receiving the display signals and is arranged to gate all of the display signals.

Regarding claims 26, 29, Eglit discloses that an active matrix display including a controller (390) and comprising a liquid crystal display (see col. 5, lines 36-38).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eglit (US 6,054,980) in view of Kawasaki et al. (US 5,812,149 cited by Applicant).

Eglit discloses that the second circuit is arranged to connect the display to an inherent power supply in response to the enable signal. However, Eglit does not disclose that the disconnecting the display from the power supply in the absence of the enable signal.

Kawasaki et al. discloses the power supply is turned off (see LCD 307 can be turned off, see col. 4, lines 8-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the using of the power supply is turned off as

taught by Kawasaki et al. into the system of Eglit because this would provide to the user a consumption power can be reduced.

9. Claims 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eglit (US 6,054,980) in view of Atkinson (US 5,991,883).

Regarding claim 5, Eglit discloses that the second circuit is arranged to gate (470, fig. 4). However, Eglit does not disclose at least one signal which influences power consumption of the display. Atkinson discloses in figure 1 that influences power consumption of the display (see the lower the refresh rate therefore save the power, see col. 2, lines 55-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the using of the lower the refresh rate therefore save the power as taught by Atkinson into the system of Eglit because this would allow the lower pixel and reduce the voltage itself of the LCD display.

Regarding claims 6-8, Eglit discloses that the second circuit comprises at least one gate (470, fig. 4) for connection between the display controller and the display, and the gate comprises at least one transmission gate (see gate connected to bus, that is the transmission gate).

Regarding claims 9-12, Eglit discloses that the second circuit is arranged to gate a memory read control signal of the display controller, and the controller comprises a frame synchronization signal (see fig. 4).

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***Allowable Subject Matter***

10. Claims 16-19, 21-23 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:  
None of the cited art teaches or suggests that the first circuit comprises a preloadable synchronous counter as claimed.

***Response To Arguments***

11. Applicant's arguments with respect to claims 1-29 have been considered but they are moot in view of new ground(s) rejection.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D. C. 20231

**Or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only).**

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Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,  
Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose telephone  
number is (703) 306-0377.

Kimnhung Nguyen  
January 28, 2005



ALEXANDER EISEN  
PRIMARY EXAMINER